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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/519,577	12/27/2004	Daniel Levner	904.0102.U1(US)	2523
29683 7590 06/04/2007 HARRINGTON & SMITH, PC 4 RESEARCH DRIVE SHELTON, CT 06484-6212			EXAMINER PAK, SUNG H	
			ART UNIT	PAPER NUMBER
			2874	
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			06/04/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/519,577

Applicant(s)

LEVNER ET AL.

Examiner

Sung H. Pak

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 08 August 2006.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-8, 16-19 and 30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5-8, 16-19 and 30 is/are rejected.
- 7) ☒ Claim(s) 4 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

**DETAILED ACTION**

Applicant's amendment filed 8/08/2006 has been entered. Claims 1-8, 16-19, and 30 are now pending. All pending claims have been carefully reconsidered by the examiner in view of applicant's arguments for patentability. After a careful reconsideration, the previous ground of claim rejection is hereby withdrawn. However, the pending claims of the present application are not in condition for allowance, and a new ground of rejection is provided in this office action based on a newly cited prior art. Accordingly, this office action is NOT made final.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-3, 5-8, 16-19, 30 are rejected under 35 U.S.C. 102(e) as being anticipated by Villeneuve et al (US 6,424,763 B1).

Villeneuve reference discloses an optical device with all limitations set forth in the above mentioned claims of the instant application. Specifically, Villeneuve discloses: an optical device comprising at least two waveguides ('302', '304' in Fig. 3) in at least one propagation layer of grating material, a first one of said waveguides ('302') adapted for transportation input radiation from a first input port to output radiation exiting from a first output port (Col. 3, ll. 41-

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45) and a second one of said waveguides ('304') transporting input radiation from a second input port to output radiation exiting from a second output port (Col. 3, ll. 21-45), and a one- or two dimensional supergrating in a modulation layer of grating material ('306' Fig. 3; Col. 2, ll. 41-56) for coupling input radiation propagating from one of said first and second input ports along a corresponding waveguide to the other of said first and second waveguides (Col. 1, ll. 46-50; col 1, ll. 61-67);

wherein said one or two dimensional supergrating couples input radiation in said first waveguide to said second waveguide in a direction substantially parallel (Fig. 3) and opposite direction (Col. 2, ll. 57-65);

wherein there are array of controllable means ('312, 314, 316, 318, 320' in Fig. 3), responsive to a set of control signals, for altering the modal index of refraction value in corresponding pixels in said array (Col. 3, ll. 54- col. 4, ll. 4) in at least tow modes including a first mode in which said device couples input radiation in said first waveguide traveling in a first direction to said second waveguide traveling in a second direction substantially parallel to said first direction and a second mode in which said device couples input radiation in said first waveguide traveling in a first direction to said second waveguide traveling in a second direction substantially opposite to said first direction (Col. 2, ll. 1-14);

wherein said array of controllable means responsive to a set of control signals that are adapted to switch radiation of any of N different wavelengths between said first and second waveguides (Col. 3, ll. 8-20) in said first and second modes in response to corresponding values of said control signal, whereby said device may be controlled to pass radiation in any one of N wavelengths from any of said input ports to any of said output ports (Col. 2, ll. 1-14).

***Allowable Subject Matter***

Claim 4 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: As discussed above, a wavelength dependent add/drop waveguide device having 2 parallel waveguides with a supergrating coupling portion is known in the art.

However, none of the prior art fairly teaches or suggests an optical waveguide device further comprising, inter alia, a supergrating coupler having a central portion disposed between the two waveguides having a grating pattern that is opposite from an outer portion of the supergrating coupler disposed outside the two waveguides, as claimed in the instant application.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sung H. Pak whose telephone number is (571) 272-2353. The examiner can normally be reached on Monday- Friday, 9AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rodney Bovernick can be reached on (571)272-2344. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Sung H. Pak  
Primary Patent Examiner  
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